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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,654

12/01/2003

Mary Lucille DeLucia

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EXAMINER

PENG, KUO LIANG

ART UNIT

PAPER NUMBER

1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/724,654

Applicant(s)

DELUCIA ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/26/06 RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 50-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 50-54, 56-68 and 70-81 is/are rejected.
- 7) ☒ Claim(s) 55 and 69 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/22/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed October 27, 2006 has been entered. Claims 1-49 are deleted. Claims 50 and 64 are amended. Now, Claims 50-81 are pending.

2. The indicated allowability of Claims 80-81 is withdrawn in view of the newly discovered reference(s) to Chino (US 7 067 592) and Su (US 2004/0116571). Rejections based on the newly cited reference(s) follow. Examiner regrets for causing any inconvenience.

3. The text of those sections of Title 35, U.S. code not included in this action can be found in prior Office Action(s).

***Claim Rejections - 35 USC § 112***

4. Claims 60 and 81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 60 (line 2), "lower" causes confusion because it is not clear as to **what composition** of which the extrusion temperature to be compared to. Should similar language recited in Claim 71 be used?

Claim 81 recites the limitation "The melt extrudable composition" in line 1. There is insufficient antecedent basis for this limitation in the claim. Should "claim 73" be -- claim 80 --?

5. Claims 50-52, 54, 56-66, 68 and 70-81 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specific styrenic tri- or tetra-block copolymers described in page 3, 1<sup>st</sup> paragraph and page 7, 2<sup>nd</sup> paragraph, does not reasonably provide enablement for **any** styrenic triblock copolymers, styrenic tetrablock copolymers or combinations thereof. (Claims 50, 52, 54, 64, 66, 68 and 80) and **any** styrenic block copolymers having a styrenic endblock. (Claims 51 and 65) The specification does not enable any person skilled

in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

***Claim Rejections - 35 USC § 102***

6. Claims 50, 56-60, 64, 70-71 and 73-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Nohr (US 5 413 655).

For Claims 50, 56-59, 64, 70 and 73-79, Nohr discloses a method of forming a melt extrudate by extruding a melt-extrudable composition comprising a thermoplastic elastomer such as the polymers derived from monomers of ethylene, butene, styrene, etc. and the block copolymers derived from these monomers and a polysiloxane polyether. The melt-extrudable composition can be used for preparing nonwoven webs, etc. (col. 4, line 21 to col. 5, line 21, col. 6, line 42 to col. 7, line 18, col. 10, line 61 to col. 12, line 61 and Examples) The amount of the polysiloxane polyether is described in col. 10, lines 48-54. The extruding temperature is exemplified in Examples. The extrudate can be a continuous filament. (col. 11, line 58 to col. 12, line 2 and col. 12, lines 43-55) The filament can be laminated on to nonwoven webs. (col. 12, line 62 to col. 13, line 8) For Claims 60 and 71, since Nohr's polysiloxane polyether reads on the claimed polysiloxane, which should lower the extrusion temperature of the composition.

7. Claims 50-53, 59-60, 63-67, 71, 73-74 and 76 are rejected under 35 U.S.C. 102(e) as anticipated by Chino (US 7 067 592).

For Claims 50-53, 59, 63-67, 73-74 and 76, Chino discloses a method for preparing a composition comprising an elastomer of a styrenic block copolymer such as SBS, SIS, **SEBS**, etc., a **linear** polysiloxane having an amino group. (col. 12, lines 15-23, col. 11, lines 8-18, col. 24, lines 9-15 and Examples) The amount of the polysiloxane is particularly preferably 10 parts by weight with respected to 100 parts by weight of elastomer. (col. 11, lines 27-40) As such, the amount of the elastomer reads on the claimed amount range. The styrenic block copolymer can be used in combination with other elastomers such as polyolefins. (col. 12, lines 1-14 and 47-51) The composition can be used for preparing extrudates such as hoses, belts, etc. (col. 25, lines 5-10, col. 25, line 50 to col. 26, line 7) For Claims 60 and 71, since Chino's polysiloxane polyether reads on the claimed polysiloxane, which should lower the extrusion temperature of the composition.

***Claim Rejections - 35 USC § 103***

8. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohr.

Nohr discloses a melt-extrudable composition, *supra*, which is incorporated herein by reference. Nohr teaches the use of polyolefins and styrenic block copolymers. (col. 5, lines 41-54) Since they are used for the same purpose, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a mixture of them. See MPEP 2144.06.

9. Claims 56, 70 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chino (US 7 067 592).

Chino discloses a composition comprising a styrenic block copolymer, *supra*, which is incorporated herein by reference.

For Claims 56 and 70, the amount of the polysiloxane can be preferably as low as 1 part by weight that is very closed to claimed about 0.5 wt%. (col. 11. lines 28-41) Court held that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) For Claim 75, Chino is silent on the claimed extruding temperature. However, extruding temperature can affect the flow/viscosity of the composition. In other words, the extruding temperature is a Result-Effective variable. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention was made to extrude the composition at whatever temperature through routine experimentation in order to achieve a desired flow/viscosity of the composition. Especially, Applicants do not show the criticality of the extruding temperature. See MPEP 2144.05 (II).

10. Claims 61-62, 72 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chino (US 7 067 592) in view of Su (US 2004/0116571).

Chino discloses a composition comprising a styrenic block copolymer, *supra*, which is incorporated herein by reference.

Chino further teaches the use of a well-known titanium-coupling agent. (col. 24, lines 9-15) Chino is silent on the titanium-coupling agent being a titanate. However, Su teaches the use of coupling agent such as **titanates** in styrenic block copolymer composition in an amount described in [0013]. The motivation to use titanate-coupling agent is to enhance the mechanical properties of the materials made of the composition. ([0013], [0028] and Examples) In light of the benefit, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate Su's titanates into Chino's composition with expected success.



11. Claims 55 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the above references teaches or fairly suggests the styrenic tetrablock copolymers set forth in the instant claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR

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only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp  
March 12, 2007



Kuo-Liang Peng  
Primary Examiner  
Art Unit 1712